



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
NATURAL RESOURCES SECTION
401 CHURCH STREET, 7TH FLOOR L & C ANNEX
NASHVILLE, TENNESSEE 37243-1534

April 12, 2011

Mr. Tarun N Surti
899 South Curtiswood Lane
Nashville, TN 37204

Subject: **General Permit
Construction and Removal of Minor Road Crossings &
Minor Alterations to Wetlands
Aquatic Resource Alteration Permit (ARAP) NRS07.232
Nashville, Davidson County, Tennessee**

Dear Mr. Surti:

We have reviewed your application for installing 30 feet of 15 inch culvert with wetland impacts of 0.03 acres and have determined the activity described in the attached notice of coverage will not violate applicable water quality standards. This permit does not preclude requirements of other federal, state, or local laws; including stream or wetland buffer requirements.

This activity is governed by the *General Permit for Construction and Removal of Minor Road Crossings & General Permit for Minor Alterations to Wetlands*. The work must be accomplished in conformance with accepted plans and information submitted in support of application NRS07.232 and the limitations and conditions set forth in the *General Permits* (enclosed). It is the responsibility of the permittee to ensure that all contractors involved with this project have read and understand the permit conditions before the project begins. Please make the necessary provisions for these circumstances.

We appreciate your attention to the Aquatic Resource Alteration Permit program. If you have any questions, please contact Mr. Benjamin Brown at (615) 532-0645 or by e-mail at Benjamin.Brown@tn.gov.

Sincerely,

Daniel C. Eagar
Manager, Natural Resources Section

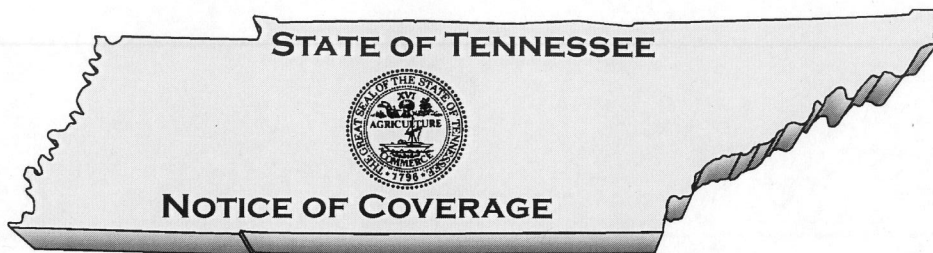
Encl: NOC and copy of general permit

CC: DWPC, Nashville Environmental Field Office

Richard Graham, U.S. Army Corps of Engineers

Mr. Jon F. Goff, , Planning, Design & Research Engineers, 2000 Lindell Avenue, Nashville, TN 37203

File copy



Under the Aquatic Resource Alteration

General Permit for Construction and Removal of Minor Road Crossings

Tennessee Department of Environment and Conservation

Division of Water Pollution Control

401 Church Street, 6th Floor, L&C Annex

Nashville, Tennessee 37243-1534

ARAP - NRS07.232

Under authority of the Tennessee Water Quality Control Act of 1977 (TWQCA, T.C.A. 69-3-101 et seq.) the Division of Water Pollution Control has determined the activity described below would not violate applicable water quality standards.

This activity is governed by the *General Permit for Construction and Removal of Minor Road Crossings* (effective July 1, 2010) issued pursuant to the TWQCA. The work must be accomplished in conformance with accepted plans, specifications, data and other information submitted in support of application NRS07.232 and the terms and conditions set forth in the above referenced general permit.

PERMITTEE:

Tarun N. Surti
899 S. Curtiswood Lane
Nashville, TN 37204

AUTHORIZED WORK:

Install 30 feet of 15 inch culvert with wing walls.

LOCATION:

612 McGavock Pike, Davidson County, 36.1556, -86.6820

WATERBODY NAME:

Tributary to Sims Branch

EFFECTIVE DATE: 11-APR-2011

EXPIRATION DATE: 11-APR-2012

This does not preclude requirements of other federal, state or local laws. In particular, work shall not commence until the applicant has received the federal §404 permit from the U. S. Army Corps of Engineers, a §26a permit from the Tennessee Valley Authority or authorization under a Tennessee NPDES Storm Water Construction Permit where necessary. This permit may also serve as a federal §401 water quality certification (pursuant to 40 C.F.R. §121.2) since the planned activity was reviewed and the division has reasonable assurance that the activity will be conducted in a manner that will not violate applicable water quality standards (T.C.A. § 69-3-101 et seq. or of § 301, 302, 303, 306 or 307 of *The Clean Water Act*).

The state of Tennessee may modify, suspend or revoke this authorization or seek modification or revocation should the state determine that the activity results in more than an insignificant violation of applicable water quality standards or violation of the TWQCA. Failure to comply with permit terms may result in penalty in accordance with T.C.A. §69-3-115.

A handwritten signature in dark ink, reading "Paul E. Davis".

Paul E. Davis, P.E.

Director, Division of Water Pollution Control



Under the Aquatic Resource Alteration
General Permit for Minor Alterations to Wetlands

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street, 6th Floor, L&C Annex
Nashville, Tennessee 37243-1534

ARAP - NRS07.232A

Under authority of the Tennessee Water Quality Control Act of 1977 (TWQCA, T.C.A. 69-3-101 et seq.) the Division of Water Pollution Control has determined the activity described below would not violate applicable water quality standards.

This activity is governed by the *General Permit for Minor Alterations to Wetlands* (effective July 1, 2010) issued pursuant to the TWQCA. The work must be accomplished in conformance with accepted plans, specifications, data and other information submitted in support of application NRS07.232 and the terms and conditions set forth in the above referenced general permit.

PERMITTEE:

Tarun N. Surti
899 S. Curtiswood Lane
Nashville, TN 37204

AUTHORIZED WORK:

Wetland impact of 0.03 acres associated with culvert construction.

LOCATION:

612 McGavock Pike, Davidson County, 36.1556, -86.6820

WATERBODY NAME:

Tributary to Sims Branch

EFFECTIVE DATE: 11-APR-2011

EXPIRATION DATE: 11-APR-2012

This does not preclude requirements of other federal, state or local laws. In particular, work shall not commence until the applicant has received the federal §404 permit from the U. S. Army Corps of Engineers, a §26a permit from the Tennessee Valley Authority or authorization under a Tennessee NPDES Storm Water Construction Permit where necessary. This permit may also serve as a federal §401 water quality certification (pursuant to 40 C.F.R. §121.2) since the planned activity was reviewed and the division has reasonable assurance that the activity will be conducted in a manner that will not violate applicable water quality standards (T.C.A. § 69-3-101 et seq. or of § 301, 302, 303, 306 or 307 of *The Clean Water Act*).

The state of Tennessee may modify, suspend or revoke this authorization or seek modification or revocation should the state determine that the activity results in more than an insignificant violation of applicable water quality standards or violation of the TWQCA. Failure to comply with permit terms may result in penalty in accordance with T.C.A. §69-3-115.

A handwritten signature in dark ink that reads "Paul E. Davis". The signature is written in a cursive style with a horizontal line underneath it.

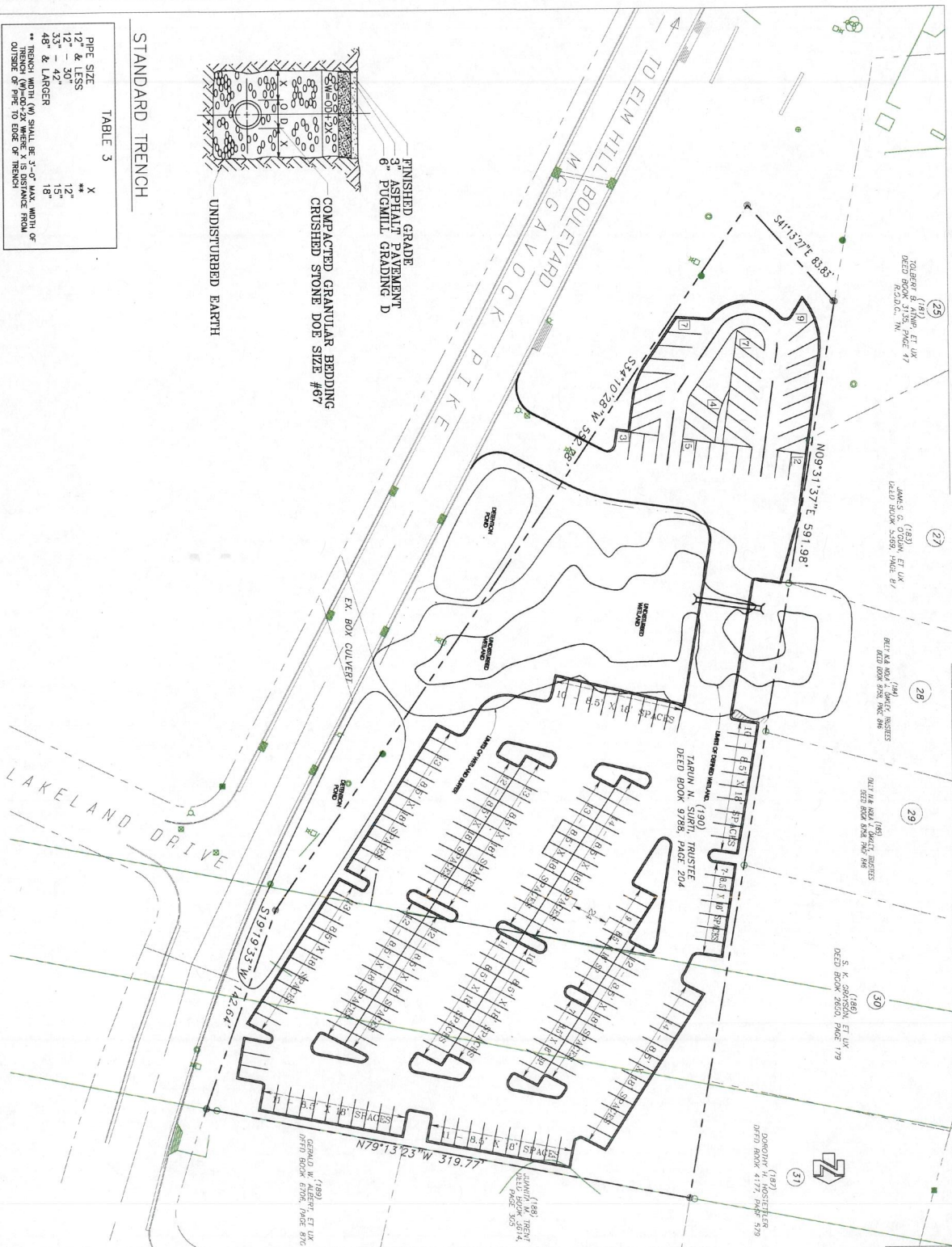
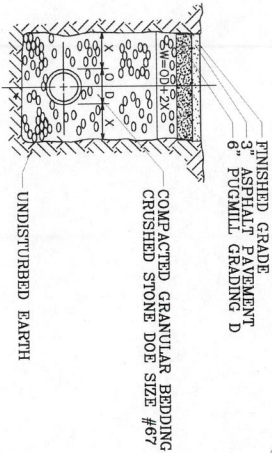
Paul E. Davis, P.E.
Director, Division of Water Pollution Control

TABLE 3

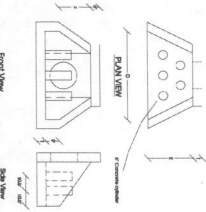
PIPE SIZE	X
12" & LESS	**
12" - 30"	**
36" & LARGER	**

** TRENCH (W) SHALL BE 3'-0" MAX. WIDTH OF TRENCH (W) 40'-24" WHERE X IS DISTANCE FROM OUTSIDE OF PIPE TO EDGE OF TRENCH

STANDARD TRENCH



OUTLET PROTECTION & HEADWALL DETAILS - PISC-07

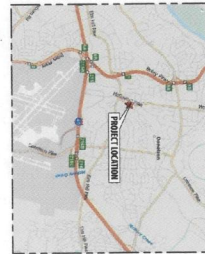
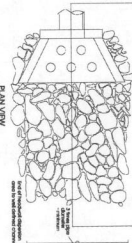
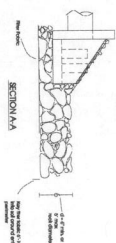


Flow	Channel	Length	Area	Volume
10'	4.0	13	52	520
15'	6.0	20	120	1800
20'	8.0	27	216	4320
25'	10.0	34	340	8500
30'	12.0	41	492	14800
35'	14.0	48	672	23520
40'	16.0	55	880	35200
45'	18.0	62	1116	50040
50'	20.0	69	1384	69100
55'	22.0	76	1684	92540
60'	24.0	83	2016	120720
65'	26.0	90	2380	153500
70'	28.0	97	2776	191360
75'	30.0	104	3204	234240
80'	32.0	111	3664	282080
85'	34.0	118	4156	335000
90'	36.0	125	4680	393000
95'	38.0	132	5236	456160
100'	40.0	139	5824	524400

GENERAL NOTES

- CONCRETE SHALL BE 28 DAYS, REINFORCED WITH #4 BARS.
- FOR 3/4" CHAMFER ON ALL EXPOSED EDGES.

Flow	Channel	Length	Area	Volume
10'	4.0	13	52	520
15'	6.0	20	120	1800
20'	8.0	27	216	4320
25'	10.0	34	340	8500
30'	12.0	41	492	14800
35'	14.0	48	672	23520
40'	16.0	55	880	35200
45'	18.0	62	1116	50040
50'	20.0	69	1384	69100
55'	22.0	76	1684	92540
60'	24.0	83	2016	120720
65'	26.0	90	2380	153500
70'	28.0	97	2776	191360
75'	30.0	104	3204	234240
80'	32.0	111	3664	282080
85'	34.0	118	4156	335000
90'	36.0	125	4680	393000
95'	38.0	132	5236	456160
100'	40.0	139	5824	524400



Tennessee Department of Environment and Conservation

General Permit for Minor Alterations to Wetlands



Effective Date: July 1, 2010
Expiration Date: June 30, 2015

Activities Covered by this Permit:

This general permit authorizes minor alterations of up to 0.1 acre of wetlands that are degraded, of low functional capacity or in situations where the proposed area lost would result in no significant change in the function and water resource values of the larger wetland system. Cumulative wetland losses for any whole project shall not exceed a 0.25 acreage limit.

Limitations of this Permit:

Certain activities due to size, location or potential water quality impacts are not covered under this general permit. Those activities are described in this section. Activities not qualifying for authorization under this general permit may be authorized by an individual permit, provided that all requirements of the *Tennessee Water Quality Control Act of 1977* are met.

- 1) Activities that impact wetlands that represent a high resource value as compared to others within the ecoregion are not covered.
- 2) Activities where all practicable measures to avoid and minimize adverse impacts to the wetlands and other waters of the state have not been employed are not covered.
- 3) Activities located in a component of the National Wild and Scenic River System, a State Scenic River, waters designated as Outstanding National Resource Waters are not covered.
- 4) Activities located in any waterway which is identified by the department as having contaminated sediments, and the activity will likely mobilize the contaminated sediments are not covered.
- 5) Activities that may result in an adverse effect to a threatened or endangered species, or to designated critical habitat; or is likely to jeopardize the continued existence of a species proposed for listing as endangered or threatened without prior authorization from the U.S. Fish and Wildlife Service as required by section 7 or section 10 of the Endangered Species Act where applicable are not covered. Adverse effects comprise, but are not necessarily limited to, the following: (a) death or injury to one or more individuals that results from activities associated with an action, (b) a change in habitat quantity or quality that results from activities associated with an action that renders the habitat unsuitable for the species, or (c) activities associated with an action that disrupts normal behavior or functions of individuals.
- 6) Activities that may result in the take, harassment, or destruction of plant or wildlife listed as threatened or endangered or a species deemed to be in need of management, as defined and identified under Tennessee Code Annotated (TCA) 70-08-103, Tennessee Wildlife Resources Agency (TWRA) Proclamations 00-14 and 00-15, and Division of Natural Heritage (DNH) Rule 0400-6-2 or which will destroy the habitat of such species without prior authorization from TWRA and/or DNH where applicable are not covered.
- 7) Activities, either individually or cumulatively, that may result in degradation to waters of the state are not covered. For example, this general permit shall not be used in incremental means to combine with other projects to alter larger areas of wetland.
- 8) Activities that otherwise require an individual permit are not covered.

Obtaining Permit Coverage:

Coverage under this general permit may be obtained by submitting a signed and completed application (form CN-1091) to the division. Work shall not commence until written authorization from the division is received. As noted above, not all activities can be covered under this permit, and an application for coverage may be denied when appropriate.

The division will establish an expiration date for coverage under this general permit that is specific to the authorization and separate from the general permit's expiration date.

Terms and Conditions of this Permit:

All activities covered under this general permit shall comply with all terms and conditions contained hereinafter.

- 1) All work shall be accomplished in conformance with the accepted plans, specifications, data and other information submitted in support of the above mentioned application and the limitations, requirements, and conditions set forth herein.
- 2) All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Rule 1200-4-3-.03 of the Rules of the Tennessee Department of Environment and Conservation. This includes,

- but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of waters of the state for any of the uses designated by Rule 1200-4-4. These uses include fish and aquatic life (including trout streams and naturally reproducing trout streams), livestock watering and wildlife, recreation, irrigation, industrial water supply, domestic water supply, and navigation.
- 3) Applicant is responsible for obtaining the necessary authorization pursuant to applicable provisions of §10 of *The Rivers and Harbors Act of 1899*; §404 of *The Clean Water Act* and §26a of *The Tennessee Valley Authority Act*, as well as any other federal, state or local laws.
 - 4) Applicant is responsible for obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities for construction sites involving clearing, grading or excavation that result in an area of disturbance of one or more acres, and activities that result in the disturbance of less than one acre if it is part of a larger common plan of development or sale.
 - 5) The wetlands alterations shall not adversely affect the functions and classified use support of adjacent wetlands or to other waters of the state.
 - 6) Materials used in wetlands alteration projects shall be free of contaminants, including toxic pollutants, hazardous substances, waste metal, construction debris and other wastes as defined by T.C.A. 69-3-103(18).
 - 7) The excavation and fill activities associated with the wetlands alteration shall be kept to a minimum.
 - 8) Excavated materials, removed vegetation, construction debris, and other wastes shall be removed to an upland location and properly stabilized or disposed of in such a manner as to prevent reentry into the waterway.
 - 9) Sediment shall be prevented from entering waters of the state. Erosion and sediment control measures shall be designed according to the size and slope of disturbed or drainage areas to detain runoff and trap sediment and shall be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. Information on erosion and sediment control measures can be found in the department's Erosion and Sediment Control Handbook (www.tn.gov/environment/wpc/sed_ero_controlhandbook/).
 - 10) Erosion and sediment control measures shall be in place and functional before earth moving operations begin, and shall be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the work day, but shall be replaced at the end of the work day.
 - 11) Litter, construction debris, and construction chemicals exposed to storm water shall be picked up prior to anticipated storm events (e.g. forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for storm water discharges (e.g., screening outfalls, daily pick-up, etc.). After use, silt fences should be removed or otherwise prevented from becoming a pollutant source for storm water discharges.
 - 12) Clearing, grubbing and other disturbance to the riparian vegetation shall be kept at the minimum necessary for slope construction, equipment operations and project completion. Unnecessary riparian vegetation removal, including trees, is prohibited.
 - 13) Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the state. All spills shall be reported to the appropriate emergency management agency and to the division. In the event of a spill, measures shall be taken immediately to prevent pollution of waters of the state, including groundwater.
 - 14) This general permit does not authorize impacts to cultural, historical or archaeological features or sites.
 - 15) Failure to comply with the terms and conditions of this permit is a violation of the *Tennessee Water Quality Control Act of 1977* and is subject to penalty in accordance with T.C.A. §69-3-115.

APPROVED: _____

Paul E. Davis, Director, Water Pollution Control

DATE: 6/28/10

Tennessee Department of Environment and Conservation

General Permit for

Construction and Removal of Minor Road Crossings



Effective Date: July 1, 2010
Expiration Date: June 30, 2015

Activities Covered by this Permit:

This general permit authorizes the construction and/or removal of minor road crossings. A "minor road crossing" is defined in Rule 1200-4-7-.03 as a bridged or culverted roadway fill across a stream or river which results in the alteration of 200 linear feet or less of stream bed (on a single stream) or shoreline. This permit also authorizes other transportation crossings of the same size restriction such as linear crossings of greenway trails.

Limitations of this Permit:

Certain activities due to size, location or potential water quality impacts are not covered under this general permit. Those activities are described in this section. Activities not qualifying for authorization under this general permit may be authorized by an individual permit, provided that all requirements of the *Tennessee Water Quality Control Act of 1977* are met.

- 1) Road crossings including transition channels, endwalls, aprons or rip rap that exceed a total length of 200 feet on a single stream for the entire project are not covered.
- 2) Road crossings that are anticipated to significantly alter the hydraulics of the stream (e.g., under-sizing or over widening the channel) are not covered.
- 3) Crossings that are non-linear features commonly associated with transportation projects such as vehicle maintenance or storage buildings, parking lots, cul-de-sacs and turn arounds are not covered.
- 4) Activities located in a component of the National Wild and Scenic River System, a State Scenic River, waters designated as Outstanding National Resource Waters are not covered.
- 5) Activities that may adversely affect wetlands are not covered.
- 6) Activities located in any waterway which is identified by the department as having contaminated sediments, and the activity will likely mobilize the contaminated sediments are not covered.
- 7) Activities that may result in an adverse effect to a threatened or endangered species, or to designated critical habitat; or is likely to jeopardize the continued existence of a species proposed for listing as endangered or threatened without prior authorization from the U.S. Fish and Wildlife Service as required by section 7 or section 10 of the Endangered Species Act where applicable are not covered. Adverse effects comprise, but are not necessarily limited to, the following: (a) death or injury to one or more individuals that results from activities associated with an action, (b) a change in habitat quantity or quality that results from activities associated with an action that renders the habitat unsuitable for the species, or (c) activities associated with an action that disrupts normal behavior or functions of individuals.
- 8) Activities that may result in the take, harassment, or destruction of plant or wildlife listed as threatened or endangered or a species deemed to be in need of management, as defined and identified under Tennessee Code Annotated (TCA) 70-08-103, Tennessee Wildlife Resources Agency (TWRA) Proclamations 00-14 and 00-15, and Division of Natural Heritage (DNH) Rule 0400-6-2 or which will destroy the habitat of such species without prior authorization from TWRA and/or DNH where applicable are not covered.
- 9) Activities, either individually or cumulatively, that may result in degradation to waters of the state are not covered. For example, this general permit shall not be used in incremental means to combine with other projects to alter larger areas of stream.
- 10) Activities that otherwise require an individual permit are not covered.

Obtaining Permit Coverage:

Coverage under this general permit may be obtained by submitting a signed and completed application (form CN-1091) to the division. Work shall not commence until written authorization from the division is received. As noted above, not all activities can be covered under this general permit, and an application for coverage may be denied when appropriate.

Certain activities do not require the submittal of an application or written authorization from the division prior to commencement of work. Those activities are where the total width of disturbance to the stream channel needed to construct a road crossing is less than 25 feet. Even though written authorization is not required, the proposed activity shall be performed in accordance with all limitations, terms and conditions of this general permit.

Where written authorization is required, the division will establish an expiration date for coverage under this general permit that is specific to the authorization and separate from the general permit's expiration date.

Terms and Conditions of this Permit:

All activities covered under this general permit shall comply with all terms and conditions contained hereinafter.

- 1) All work shall be accomplished in conformance with the accepted plans, specifications, data and other information submitted in support of the above mentioned application and the limitations, requirements, and conditions set forth herein.
- 2) All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Rule 1200-4-3-.03 of the Rules of the Tennessee Department of Environment and Conservation. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of waters of the state for any of the uses designated by Rule 1200-4-4. These uses include fish and aquatic life (including trout streams and naturally reproducing trout streams), livestock watering and wildlife, recreation, irrigation, industrial water supply, domestic water supply, and navigation.
- 3) Applicant is responsible for obtaining the necessary authorization pursuant to applicable provisions of §10 of *The Rivers and Harbors Act of 1899*; §404 of *The Clean Water Act* and §26a of *The Tennessee Valley Authority Act*, as well as any other federal, state or local laws.
- 4) Applicant is responsible for obtaining coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Construction Activities for construction sites involving clearing, grading or excavation that result in an area of disturbance of one or more acres, and activities that result in the disturbance of less than one acre if it is part of a larger common plan of development or sale.
- 5) Where practicable, the bottom of culverts should be constructed below the stream bed level in a manner that allows natural substrate to reestablish.
- 6) The activity may not be conducted in a manner that would permanently disrupt the movement of fish and aquatic life.
- 7) Applicant is responsible for complying with all applicable floodplain regulations. It is the responsibility of the applicant to contact local government officials to determine what the regulations are at the specific location of the proposed project.
- 8) The width of the fill associated with the crossing shall be limited to the minimum necessary for the actual crossing.
- 9) Only clean rock used for the road crossing may be placed directly in the stream. Clean rock can be of various type and size, depending on the application. Clean rock shall not contain fines, soils or other wastes or contaminants.
- 10) The crossing shall be culverted, bridged or otherwise designed to prevent the impoundment of normal or base flows. Base flow is the usual or normal flow of the stream that is supplied primarily by groundwater from springs and seeps, but not affected by rapid runoff during and after rainfall.
- 11) Stream beds shall not be used as transportation routes for construction equipment. Temporary stream crossings shall be limited to one point in the construction area and erosion control measures shall be utilized where stream banks are disturbed. The crossing shall be constructed so that stream flow is not obstructed. Following construction, all materials used for the temporary crossing shall be removed and disturbed stream banks shall be restored and stabilized if needed.
- 12) Removal of road crossings shall be done in the dry to the maximum extent practicable.
- 13) Where a crossing is removed, the channel shall be returned to stable conditions, which replicates the characteristics (dimensions, shape, substrate, etc.) of the upstream and downstream conditions.
- 14) Upon removal of a crossing, stream banks shall be stabilized. Materials used in bank stabilization shall include clean rock, riprap, anchored trees or other non-erodible materials found in the natural environment.
- 15) Materials used in road crossing projects shall be free of contaminants, including toxic pollutants, hazardous substances, waste metal, construction debris and other wastes as defined by T.C.A. 69-3-103(18).
- 16) The excavation and fill activities associated with the road crossing shall be kept to a minimum and shall be separated from flowing waters except in instances involving only the placement of a culvert and clean rock. The crossing shall be constructed in the dry to the maximum extent practicable, by diverting flow utilizing cofferdams, berms, temporary channels or pipes. Temporary diversion channels shall be protected by non-erodible material and lined to the expected high water level.
- 17) Excavated materials, removed vegetation, construction debris, and other wastes shall be removed to an upland location and properly stabilized or disposed of in such a manner as to prevent reentry into the waterway.
- 18) Material may not be placed in a location or manner so as to impair surface water flow into or out of any wetland area.
- 19) Sediment shall be prevented from entering waters of the state. Erosion and sediment controls measures shall be designed according to the size and slope of disturbed or drainage areas to detain runoff and trap sediment and shall be properly selected, installed, and maintained in accordance with the manufacturer's specifications and good engineering practices. Information on erosion and sediment control measures can be found in the

- 20) Erosion and sediment control measures shall be in place and functional before earth moving operations begin, and shall be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the work day, but shall be replaced at the end of the work day.
- 21) Litter, construction debris, and construction chemicals exposed to storm water shall be picked up prior to anticipated storm events (e.g. forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for storm water discharges (e.g., screening outfalls, daily pick-up, etc.). After use, silt fences should be removed or otherwise prevented from becoming a pollutant source for storm water discharges.
- 22) Clearing, grubbing and other disturbance to the riparian vegetation shall be kept at the minimum necessary for slope construction and equipment operations. Unnecessary riparian vegetation removal, including trees, is prohibited.
- 23) Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 10 calendar days prior to grading or earth moving unless the area is seeded and/or mulched or other temporary cover is installed.
- 24) Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the state. All spills shall be reported to the appropriate emergency management agency and to the division. In the event of a spill, measures shall be taken immediately to prevent pollution of waters of the state, including groundwater.
- 25) This general permit does not authorize impacts to cultural, historical or archaeological features or sites.
- 26) Failure to comply with the terms and conditions of this permit is a violation of the *Tennessee Water Quality Control Act of 1977* and is subject to penalty in accordance with T.C.A. §69-3-115.

APPROVED: _____

Paul E. Davis, Director, Water Pollution Control

DATE: 6/28/10